

## The Contents of Case 10804228

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Qnum	Query	DB Name	Thesaurus	Operator	Plural
Q1	polymer electrolyte and (sulfonated or sulphonated polymer)	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q2	Q1 and proton conducting membrane	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q3	Q2	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q4	Q3 and @pd > 20050321	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q5	polymer electrolyte and (electrochemical cell or battery) and (sulfonat\$3 or sulphonat\$3)	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q6	Q5 and membrane	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q7	Q6 and (sulfonic or sulphonic acid group)	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q8	Q7 and blocks same (random\$2 or alternat\$3)	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES
Q9	Q8 and proton conducting membrane	USPT,USOC,EPAB,JPAB,DWPI,TDBD	None	ADJ	YES

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### Case Operation



No.	Publication No.	Title
1.	<u>2005 - 166557</u>	POLYMER ELECTROLYTE COMPOSITE MEMBRANE, ITS MANUFACTURING METHOD AND SOLID POLYMER TYPE FUEL CELL USING IT
2.	<u>2005 - 158286</u>	ELECTROLYTE MEMBRANE FOR DIRECT DIMETHYL ETHER TYPE FUEL CELL AND DIRECT DIMETHYL ETHER TYPE FUEL CELL USING THE SAME
3.	<u>2005 - 154578</u>	CROSSLINKED POLYMER ELECTROLYTE AND PROTON CONDUCTIVE MEMBRANE
4.	<u>2005 - 135651</u>	SOLID POLYMER ELECTROLYTE MEMBRANE
5.	<u>2005 - 133146</u>	SOLID POLYMER TYPE ELECTROLYTIC MEMBRANE
6.	<u>2005 - 082726</u>	CROSSLINKED SULFONATED POLYIMIDE, METHOD FOR PRODUCING THE SAME AND USE THEREOF
7.	<u>2005 - 063690</u>	ELECTROLYTE MEMBRANE AND FUEL CELL USING SAME
8.	<u>2005 - 060484</u>	POLYARYLENE COPOLYMER CONTAINING SULFONIC ACID GROUP, METHOD FOR PRODUCING THE SAME, POLYMER SOLID ELECTROLYTE AND PROTON CONDUCTIVE FILM
9.	<u>2005 - 048121</u>	PERFLUOROSULFONIC ACID POLYMER
10.	<u>2005 - 044815</u>	MANUFACTURING METHOD OF SOLID POLYMER ELECTROLYTE FUEL CELL
11.	<u>2004 - 363114</u>	FUEL CELL AND ITS OPERATION METHOD
12.	<u>2004 - 363113</u>	FUEL CELL AND, ITS FORMATION METHOD AND OPERATION METHOD
13.	<u>2004 - 363028</u>	POLYELECTROLYTE MEMBRANE AND ITS MANUFACTURING METHOD
14.	<u>2004 - 349267</u>	FUEL CELL SYSTEM AND ITS OPERATION METHOD
15.	<u>2004 - 346163</u>	NEW AROMATIC SULFONIC ACID ESTER DERIVATIVE, POLYARYLENE, SULFO-CONTAINING POLYARYLENE AND METHOD FOR PRODUCING THE SAME, AND SOLID POLYELECTROLYTE AND PROTON CONDUCTIVE MEMBRANE
16.	<u>2004 - 339337</u>	METHOD FOR SULFONATING POLYARYLENE SULFIDE, POLYMER ELECTROLYTE MEMBRANE AND FUEL CELL USING THE SAME



17. 2004 - 300360 METHOD FOR PRODUCING ELECTROLYTE MEMBRANE FOR FUEL CELL COMPRISING GRAFT POLYMER ION-EXCHANGE MEMBRANE
18. 2004 - 273408 POLYMER ELECTROLYTE MEMBRANE, ITS MANUFACTURING METHOD, AND FUEL CELL USING IT
19. 2004 - 273298 POLYMER ELECTROLYTE MEMBRANE
20. 2004 - 269862 AROMATIC POLYARYL ETHER AND ION-CONDUCTIVE POLYMER
21. 2004 - 247091 ELECTROLYTE MEMBRANE ELECTRODE JUNCTION BODY AND DIRECT METHANOL TYPE FUEL CELL
22. 2004 - 193109 MANUFACTURING METHOD OF MEMBRANE-ELECTRODE ASSEMBLY
23. 2004 - 171921 METHOD OF COLLECTING CATALYST METAL AND FLUORINE CONTAINING POLYMER HAVING SULFONIC ACID GROUP FROM FUEL CELL
24. 2004 - 103299 ELECTROLYTE MEMBRANE AND FUEL CELL WITH THE SAME
25. 2004 - 039557 PHENOLIC RESIN-BASED POLYMER ELECTROLYTE MEMBRANE FOR SOLID POLYMER ELECTROLYTE FUEL CELL, MEMBRANE-ELECTRODE JOINT BODY USING THE SAME AND FUEL CELL
26. 2004 - 014436 ELECTROLYTE FILM FOR FUEL CELL CONSISTING OF FLUORINE POLYMER ION EXCHANGE MEMBRANE
27. 2003 - 297394 ELECTROLYTE MEMBRANE FOR SOLID HIGH POLYMER FUEL CELL AND ITS MANUFACTURING METHOD
28. 2003 - 272695 ALKOXYSULFONIC ACID GROUP CONTAINED POLYARYLENE ETHER, AND COMPOSITE CONTAINING THE SAME, ION CONDUCTIVE MEMBRANE USING THE SAME, ADHESIVE, COMPOUND, AND FUEL CELL AND THEIR MANUFACTURING METHOD
29. 2003 - 261684 METHOD FOR RECOVERING SULFONIC GROUP-CONTAINING POLYMER
30. 2003 - 261653 PROCESS FOR PREPARING SULFONIC ACID GROUP-CONTAINING POLYMER
31. 2003 - 234014 POLYMER ELECTROLYTE FILM AND SOLID POLYMER FUEL CELL
32. 2003 - 147076 SULFONATED FLUORINE-CONTAINING POLYMER, RESIN COMPOSITION CONTAINING THE SAME AND POLYMER



## ELECTROLYTE MEMBRANE

33. 2003 - 147075 SULFONATED FLUORINE-CONTAINING POLYMER, RESIN COMPOSITION CONTAINING THE SAME AND POLYMER ELECTROLYTE MEMBRANE
34. 2003 - 147074 AROMATIC POLYARYLENE ETHER COMPOUND CONTAINING SULFONIC ACID GROUP AND POLYMER ELECTROLYTE MEMBRANE
35. 2003 - 055457 SULFONIC ACID-CONTAINING ION CONDUCTIVE POLYBENZIMIDAZOLE
36. 2003 - 051324 MANUFACTURING METHOD OF SOLID POLYMER ELECTROLYTE MEMBRANE FOR FUEL CELL
37. 2003 - 051320 MEMBRANE-ELECTRODE JUNCTION FOR SOLID POLYMER TYPE FUEL CELL AND ITS MANUFACTURING METHOD
38. 2003 - 022709 BLENDED POLYMER ELECTROLYTE, ELECTROLYTIC MEMBRANE HAVING THE ELECTROLYTE AS MAIN COMPONENT, AND MEMBRANE /ELECTRODE JUNCTION CONTAINING THE ELECTROLYTE
39. 2002 - 358978 POLYMER ELECTROLYTE MEMBRANE AND ITS MANUFACTURING METHOD
40. 2002 - 280003 METHOD FOR MANUFACTURING ELECTRODE OF POLYMER ELECTROLYTE FUEL CELL AND ELECTROLYTE MEMBRANE ELECTRODE JOINING BODY
41. 2002 - 206026 SULFONIC ACID GROUP-CONTAINING POLYOXAZOLE AND MEMBRANE CONSISTING ESSENTIALLY OF THE SAME
42. 2002 - 206025 SULFONIC ACID GROUP-CONTAINING POLYOXAZOLE AND MEMBRANE CONSISTING ESSENTIALLY OF THE SAME
43. 2002 - 201270 ION-CONDUCTIVE POLYAZOLE HAVING SULFONIC ACID GROUP AND MEMBRANE CONTAINING IT AS MAIN COMPONENT
44. 2002 - 201269 NOVEL POLYBENZAZOLE HAVING IONIC GROUP AND MEMBRANE CONTAINING IT AS MAIN COMPONENT
45. 2002 - 201268 POLYMER HAVING IONIC GROUP AND MEMBRANE CONTAINING IT AS MAIN COMPONENT
46. 2002 - 105216 SOLID POLYMER ELECTROLYTE, ITS MEMBRANE, ITS SOLUTION FOR CATALYTIC COATING ELECTRODE, MEMBRANE/ELECTRODE



## BONDED MATERIAL USING IT AND FUEL CELL

47. 2001 - 250567 POLYMER ELECTROLYTE AND MANUFACTURING METHOD THEREFOR
48. 2000 - 251906 SOLID POLYMER ELECTROLYTE MEMBRANE AND BIPOLAR MEMBRANE FUEL CELL USING IT
49. 2000 - 243135 SOLID ELECTROLYTE MEMBRANE
50. 2000 - 231928 SOLID POLYMER ELECTROLYTE FUEL CELL

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